

Appl. No.: 09/770,358
Amdt. dated: November 13, 2003
Reply to Office action of July 18, 2003

Patent
Docket No. 256/295
701122001

REMARKS

Claims 1-32 stand rejected under 35 USC § 103 based on U.S. Patent No. 5,963,933 issued to Cheng et al. ("Cheng") in view of U.S. Patent No. 6,567,823 issued to Rothschild ("Rothschild").

Cheng discloses:

An outer join involves a join of two tables, which are referred to as the left table and the right table. An outer join differs from an inner join in that it includes rows that have no "partners"--that is, rows from the left table that have no matching rows in the right table, or vice versa.

(Col. 2, lines 40-44). However, Cheng does not disclose "updating each row in the destination table with a row from the results of the outer join operation containing a matching element in the first and second columns," as recited in claim 1. Cheng further does not disclose "inserting into the destination table each row from the results of the outer join operation with a non-matching element in the first and second columns," as recited in claim 1.

Rothschild discloses:

In this case, update statements are created on a target row by target row basis, through a special join between the "before image" of the row that has been updated and the source database tables that cannot change, using the migration's select statement.

For every row selected by this join, we create the update statement, with a "where" clause of the form "where C1=V1 and C2=V2 and . . . and CN=VN", in which C1, C2, . . . CN are the target columns mapped from all the source tables, and the V1, V2 . . . , VN are the values the migration maps to these columns taken from the result of the select statement defining the above special join.

The values to be set to the target columns by the update statements are taken from the after image of the last reference to each RID.

FIG. 5 describes the insertion of new rows into the target table (after all the delete and update operations have been performed, and the creation of the insert tables T_{Δ}^k (8) and ignore files R_{Δ}^k (7) has been completed for all k's from 1 to n). This activity

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corresponds to the procedure Join Insert and source tables (12) described in FIG. 2 and to the procedure Implement Inserts (17) in the same figure.

(Col. 9, lines 4-24).

Rothschild does not disclose "updating each row in the destination table *with a row from the results of the outer join operation containing a matching element in the first and second columns,*" as recited in claim 1. Rothschild also does not disclose "inserting into the destination table *each row from the results of the outer join operation with a non-matching element in the first and second columns,*" as recited in claim 1.

Even if Cheng and Rothschild were combined, the combination would neither teach nor suggest "updating each row in the destination table with a row from the results of the outer join operation containing a matching element in the first and second columns," as recited in claim 1.

The combination would also neither teach nor suggest "inserting into the destination table each row from the results of the outer join operation with a non-matching element in the first and second columns," as recited in claim 1.

Therefore, applicants submit that claim 1 is patentable over Cheng in view of Rothschild. Given that claims 2 through 4 depend from claim 1, applicants submit that these claims are also patentable over Cheng in view of Rothschild.

Claim 5 stands rejected based on Cheng in view of Rothschild.

Cheng and Rothschild, alone or in combination, neither disclose nor suggest "updating the destination table with the set of matching rows," as recited in claim 5. Cheng and Rothschild, alone or in combination, further neither disclose nor suggest "inserting into the destination table the set of non-matching rows," as recited in claim 5. Therefore, applicants submit that claim 5 is patentable over Cheng in view of Rothschild. Given that Claims 6-8 depend from claim 5, applicants submit that these claims are also patentable over Cheng in view of Rothschild.

Claim 9 stands rejected based on Cheng in view of Rothschild.

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Cheng and Rothschild, alone or in combination, neither disclose nor suggest "updating a row in the destination table with a row from the source table upon the success of a comparison operation on an element in the first column of the row from the source table and an element in the second column of the row from the destination table," as recited in claim 9. Cheng and Rothschild, alone or in combination, further neither disclose nor suggest "inserting a row from the source table into the destination table upon the failure of a comparison operation on an element in the first column of the row from the source table and an element in the second column of the row from the destination table," as recited in claim 9. Therefore, applicants submit that claim 9 is patentable over Cheng in view of Rothschild. Given that Claims 10-12 depend from claim 9, applicants submit that these claims are also patentable over Cheng in view of Rothschild.

Claim 13 stands rejected based on Cheng in view of Rothschild.

Cheng and Rothschild, alone or in combination, neither disclose nor suggest "determining a set of update rows based upon the success of a comparison operation performed on the source key and the destination key, [and] updating the destination table with the set of update rows," as recited in claim 13. Cheng and Rothschild, alone or in combination, further neither disclose nor suggest "determining a set of insert rows based upon the failure of a comparison operation performed on the source key and the destination key, [and] inserting into the destination table the set of insert rows," as recited in claim 13. Therefore, applicants submit that claim 13 is patentable over Cheng in view of Rothschild. Given that Claims 14-16 depend from claim 13, applicants submit that these claims are also patentable over Cheng in view of Rothschild.

Claim 17 stands rejected based on Cheng in view of Rothschild.

Cheng and Rothschild, alone or in combination, neither disclose nor suggest "updating each row in the destination table with a row from the results of the outer join operation containing a matching element in the first and second columns," as recited in claim 17. Cheng and Rothschild, alone or in combination, further neither disclose nor suggest "inserting into the

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destination table each row from the results of the outer join operation with a non-matching element in the first and second columns," as recited in claim 17. Therefore, applicants submit that claim 17 is patentable over Cheng in view of Rothschild. Given that Claims 18-20 depend from claim 17, applicants submit that these claims are also patentable over Cheng in view of Rothschild.

Claim 21 stands rejected based on Cheng in view of Rothschild.

Cheng and Rothschild, alone or in combination, neither disclose nor suggest "determining a set of update rows based upon the success of a comparison operation performed on the source key and the destination key, [and] updating the destination table with the set of update rows," as recited in claim 21. Cheng and Rothschild, alone or in combination, further neither disclose nor suggest "determining a set of insert rows based upon the failure of a comparison operation performed on the source key and the destination key, [and] inserting into the destination table the set of insert rows," as recited in claim 21. Therefore, applicants submit that claim 21 is patentable over Cheng in view of Rothschild. Given that Claims 22-24 depend from claim 21, applicants submit that these claims are also patentable over Cheng in view of Rothschild.

Claim 25 stands rejected based on Cheng in view of Rothschild.

Cheng and Rothschild, alone or in combination, neither disclose nor suggest "updating a row in the destination table with a row from the source table upon the success of a comparison operation on an element in the first column of the row from the source table and an element in the second column of the row from the destination table; as recited in claim 25. Cheng and Rothschild, alone or in combination, further neither disclose nor suggest "inserting a row from the source table into the destination table upon the failure of a comparison operation on an element in the first column of the row from the source table and an element in the second column of the row from the destination table," as recited in claim 25. Therefore, applicants submit that claim 25 is patentable over Cheng in view of Rothschild. Given that Claims 26-28 depend from claim 25, applicants submit that these claims are also patentable over Cheng in view of

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Rothschild.

Claim 29 stands rejected based on Cheng in view of Rothschild.

Cheng and Rothschild, alone or in combination, neither disclose nor suggest "updating the destination table with the set of update rows," as recited in claim 29. Cheng and Rothschild, alone or in combination, further neither disclose nor suggest "inserting into the destination table the set of insert rows," as recited in claim 29. Therefore, applicants submit that claim 29 is patentable over Cheng in view of Rothschild. Given that Claims 30-32 depend from claim 29, applicants submit that these claims are also patentable over Cheng in view of Rothschild.

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BINGHAM McCUTCHEN LLP

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CONCLUSION

Reconsideration and allowance of all pending claims are respectfully requested. The Examiner may call the Assignee's attorney at the number below to further advance prosecution of this case to issuance.

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Respectfully submitted,

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